

Notice of Allowability

Application No.

09/957,450

Examiner

Douglas N Washburn

Applicant(s)

BULTMAN ET AL.

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to paper filed 22 April 2004.
2. ☒ The allowed claim(s) is/are 1793-1871 and 2057.
3. ☒ The drawings filed on 20 September 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

- 1 Applicant canceled claims 1-1792, 1872-2056 and 2058-6632.

Election/Restrictions

- 2 Applicant's election without traverse of claims 1793-1871 and 2057 in Paper No. 04/22/2004 is acknowledged.

Prior Art Cited

- 3 Sandland et al. (US 4,618,938) teaches an automatic semiconductor wafer inspection system which includes a wafer inspector, a system computer performing movement and function control and data storage functions and a high speed image computer. Patterned wafers selected for inspection are transported to a vacuum chuck located on an X-Y stage and positioned in a macro inspection station. Surface illumination is changed to test for macro defects. Reflected light is applied to a camera where the optical image is converted to an electrical representation, stored, and then processed by the high speed image computer. After a wafer has been positioned and inspected in the macro inspection station, it is moved to the micro inspection station. An autofocus arrangement focuses the objective lens to accomplish micro inspection tests. Sandland is silent regarding determining a first property and a second property of the specimen from one or more output signals during use. Sandland also fails to teach a remote computer configured to receive one or more output signals to determine a first property and a second property of the specimen..

Sekine (US 5,912,732) teaches a surface inspection apparatus comprising a light source, a scan optical system, a moving unit, a light receiving unit, and a signal processing unit performing surface inspection based on signals from the light receiving unit. Sekine is silent in regard to determining a first property and a second property of a specimen from one or more output signals during use, wherein the first property comprises a presence of macro defects and the second property comprises a presence of micro defects. Sekine further is silent in regard to a remote computer configured to receive one or more output signals to determine a first property and a second property of a specimen from one or more output signals during use.

Stern et al. (US 6,603,874) teaches a system and method for simultaneously obtaining a plurality of images of an object or pattern from a plurality of different viewpoints. A light source is positioned to illuminate at least a portion of an object. A plurality of light guides are positioned to simultaneously receive light reflected from the object and transmit the received light to a plurality of photodetectors. Signals generated by the photodetectors are processed and a plurality of images of the object are formed. Stern is silent regarding a remote computer configured to receive one or more output signals to determine a first property and a second property of a specimen from one or more output signals during use. Further, Stern is silent in regard to a first property comprising a presence of macro defects, and a second property comprising a presence of micro defects.

Tanaka (US 6,629,051) teaches a defect inspection data processing system. The system includes a client computer having an image pickup section and a data transfer section. A database stores image data transferred from the client computer. The system also includes a host computer having a defect extraction section for extracting defect information from the image data stored in the database, and a judgment section for judging whether or not the inspected object is good, on the basis of the defect information extracted by the defect extraction section. Tanaka is silent in regard to determining a first property and a second property of a specimen from one or more output signals during use, wherein the first property comprises a presence of macro defects and the second property comprises a presence of micro defects.

Singh et al. (US 6,650,422) teaches a method and system for non-destructively detecting asymmetry in the profile of a feature formed on a wafer during the process of semiconductor fabrication. A beam of light or radiation is directed towards a feature and a reflected beam is detected. Data associated with the reflected beam is correlated with data associated with known feature profiles. Using the profile characteristics, an asymmetry of the feature is determined which is then used to generate feedback or feedforward process control data to compensate for or correct such asymmetry in subsequent processing. Singh is silent regarding a remote computer configured to receive one or more output signals to determine a first property and a second property of a specimen from one or more output signals during use. Further, Stern is silent in regard to a first property comprising a presence of macro defects, and a second property comprising a presence of micro defects.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance:

Claim 1793 recites, in part, "a processor coupled to the measurement device and configured to determine a first property and a second property of the specimen from the one or more output signals during use, wherein the first property comprises a presence of macro defects on the specimen, and wherein the second property comprises a presence of micro defects on the specimen". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claims 1794-1871 depend from claim 1793.

Claim 2057 recites, in part, "the remote controller computer is configured to receive the at least partially processed one or more output signals and to determine a first property and a second property of the specimen from the at least partially processed one or more output signals during use, wherein the first property comprises a presence of macro defects on the specimen, and wherein the second property comprises a presence of micro defects on the specimen". This feature in combination with the remaining claimed structure avoids the prior art of record.

It is these limitations, which are not found, taught or suggested in the prior art of record, and are recited in the claimed combination that makes these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

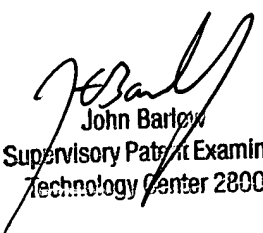
4 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas N Washburn whose telephone number is (571) 272-2284. The examiner can normally be reached on Monday through Thursday 6:30 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DNW


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